Health Canada Santé Canada

Your health and safety... our priority. *Votre santé et votre sécurité... notre priorité.*

Re-evaluation Decision RVD2011-06

Heavy Duty Wood Preservatives:

Creosote, Pentachlorophenol, Chromated Copper Arsenate (CCA) and Ammoniacal Copper Zinc Arsenate (ACZA)

(publié aussi en français)

22 June 2011

This document is published by the Health Canada Pest Management Regulatory Agency. For further information, please contact:

Publications
Pest Management Regulatory Agency
Health Canada
2720 Riverside Drive
A.L. 6604-E2
Ottawa, Ontario
K1A 0K9

Internet: pmra.publications@hc-sc.gc.ca
healthcanada.gc.ca/pmra
Facsimile: 613-736-3758
Information Service:
1-800-267-6315 or 613-736-3799
pmra.infoserv@hc-sc.gc.ca

Canada

ISSN: 1925-1017 (print)
1925-1025 (online)

Catalogue number: H113-28/2011-6E (print version)
H113-28/2011-6E-PDF (PDF version)

© Her Majesty the Queen in Right of Canada, represented by the Minister of Health Canada, 2011

All rights reserved. No part of this information (publication or product) may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in a retrieval system, without prior written permission of the Minister of Public Works and Government Services Canada, Ottawa, Ontario K1A 0S5.

Table of Contents

Re-evaluation Decision 1
What Does Health Canada Consider When Making a Re-evaluation Decision? 2
What are Creosote, Pentachlorophenol, Chromated Copper Arsenate and Ammoniacal Copper Zinc Arsenate? 2
Health Considerations 3
Environmental Considerations 3
Measures to Minimize Risk 4
Other Information 5
Appendix I Comments and Responses 7
Appendix II Label Amendments for Heavy Duty Wood Preservative Products 11

Re-evaluation Decision

After a re-evaluation of the heavy duty wood preservatives creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc arsenate, Health Canada's Pest Management Regulatory Agency (PMRA), under the authority of the *Pest Control Products Act* and Regulations, is granting continued registration of these products for sale and use in Canada.

An evaluation of available scientific information found that heavy duty wood preservatives creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc are acceptable for continued registration when used according to label directions. At this time, these products are critical to the wood preservation industry because there are limitations with respect to registered alternatives. As a condition of continued registration, new risk-reduction measures must be included on the labels of all products. Additional data will be requested as a result of this re-evaluation. The PMRA is also requiring the development of a risk management plan, in conjunction with Canadian stakeholders, to further lower potential risks for those working with these products in wood-treatment facilities.

Though some occupational risks of concern were identified during this evaluation, the risk assessment is expected to overestimate actual risk to Canadian workers. This is because the risk assessment was based on occupational exposure data which pre-dated the implementation of a program of best management practices by the Canadian wood-treatment industry. These practices are identified in *Recommendations for the design and operation of wood preservation facilities – technical recommendations* document (Environment Canada, 2004) (TRD) and were designed to minimize environmental and human health exposures. The TRD has currently been adopted by over 90% of Canadian wood-treatment facilities. As a condition of the continued registration, all wood-treatment facilities will be required to follow the *Recommendations for the design and operation of wood preservation facilities – technical recommendations* document when using creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc arsenate products.

The regulatory approach for the re-evaluation of the heavy duty wood preservatives creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc arsenate was first presented in Proposed Re-evaluation Decision PRVD2010-03, *Heavy Duty Wood Preservatives: Creosote, Pentachlorophenol, Chromated Copper Arsenate (CCA) and Ammoniacal Copper Zinc Arsenate (ACZA)*, a consultation document[1]. This Re-evaluation Decision[2] describes this stage of the PMRA's regulatory process for the re-evaluation of the heavy duty wood preservatives and summarizes the Agency's decision and the reasons for it. Comments received during the consultation process did not result in substantial changes to the proposed regulatory decision as described in the PRVD and Appendix I summarizes the comments and provides the PMRA's response. The decision in this document is consistent with the proposed re-evaluation decision stated in PRVD2010-03. To comply with this decision, registrants of products

1 "Consultation statement" as required by subsection 28(2) of the *Pest Control Products Act*.

2 Decision statement" as required by subsection 28(5) of the *Pest Control Products Act*.

containing creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc arsenate will be informed of the specific requirements affecting their product registration(s)

What Does Health Canada Consider When Making a Re-evaluation Decision?

The PMRA's pesticide re-evaluation program considers potential risks, as well as value, of pesticide products to ensure they meet modern standards established to protect human health and the environment. Regulatory Directive DIR2001-03, *PMRA Re-evaluation Program*, presents the details of the re-evaluation activities and program structure.

Creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc arsenate were jointly re-evaluated by Health Canada's Pest Management Regulatory Agency and the United States Environmental Protection Agency (USEPA). During the re-evaluation the Canadian wood-treatment industry has been actively developing and implementing a program of best management practices (namely, *Recommendations for the design and operation of wood preservation facilities – technical recommendations* document [Environment Canada, 2004]) designed to minimize environmental and human health effects potentially associated with wood treatment. Since no similar, industry-wide program is in place within the United States, the USEPA has required specific mitigation measures for the operation of wood-treatment facilities within the United States. Some of these measures may duplicate or differ from what has already been implemented by industry in Canada. For that reason, the approaches to risk mitigation and risk management proposed in this document differ from those required by the USEPA.

For more details on the information presented in this Re-evaluation Decision, please refer to the Science Evaluation in the related Proposed Re-evaluation Decision PRVD2010-03, *Heavy Duty Wood Preservatives: Creosote, Pentachlorophenol, Chromated Copper Arsenate (CCA) and Ammoniacal Copper Zinc Arsenate (ACZA)*.

What are Creosote, Pentachlorophenol, Chromated Copper Arsenate and Ammoniacal Copper Zinc Arsenate?

Creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc arsenate are heavy duty wood preservatives applied to wood through high pressure impregnation in a treatment cylinder, or retort, at specialized treatment facilities. This process imparts chemicals into wood to a depth that provides long-term control of fungi, insects and marine borers. In addition to pressure treatment applications, pentachlorophenol may also be applied by thermal dip treatment and creosote is available as a commercial class brush-on formulation to treat cut ends and drill holes of pressure-treated wood.

Health Considerations

Can Approved Uses of Creosote, Pentachlorophenol, Chromated Copper Arsenate and Ammoniacal Copper Zinc Arsenate, Affect Human Health?

Workers may be exposed to heavy duty wood preservatives by working in wood-treatment facilities, using brush-on remedial formulations (namely, creosote) or by working with or handling wood after it has been treated.

The PMRA considers two key factors when assessing health risks: the levels at which no health effects occur and the levels to which people may be exposed. The dose levels used to assess risks are established to protect the most sensitive human population (for example, children and nursing mothers).

Currently registered uses of these heavy duty wood preservatives do not result in dietary or drinking water risks, nor do they entail risks to bystanders.

Potential risks from inhalation and dermal exposure were identified for some occupational tasks within wood-treatment facilities. However, it is important to note that the risks were assessed based on exposure estimates which pre-dated industry's widespread adoption of risk reduction measures.[3] Therefore the re-evaluation assessment is expected to overestimate actual risks to Canadian workers.

The addition of new risk-reduction measures, which must be added to product labels, and the development of a Risk Management Plan for heavy duty wood preservatives will continue to lower the potential for occupational risks to treatment facility workers. Additionally, all facilities will be required to follow the *Recommendations for the design and operation of wood preservation facilities – technical recommendations* when using these heavy duty wood preservatives.

Environmental Considerations

What Happens When Creosote, Pentachlorophenol, Chromated Copper Arsenate or Ammoniacal Copper Zinc Arsenate are Introduced Into the Environment?

Creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc arsenate are unlikely to affect non-target organisms when used according to the revised label directions.

The assessment of the environmental risk of heavy duty wood preservatives has shown that in general, ground-based structures made from pressure-treated wood that is properly treated and fixed or stabilized, are unlikely to cause any major environmental hazard. The potential risk is

---

[3] Namely, implementation of *Recommendations for the design and operation of wood preservation facilities – technical recommendations* document.

greater from treated wood that is submerged in water. However, as the leached components remain mainly adsorbed in sediment at the base of the treated structure, the risk to organisms in the water column is below the level of concern.

Measures to Minimize Risk

Labels of registered pesticide products include specific instructions for use. Directions include risk-reduction measures to protect human health and the environment. These directions must be followed by law. As a result of the re-evaluation of heavy duty wood preservatives, the PMRA is requiring further risk-reduction measures for product labels.

Human Health

- Updating of label first aid directions.
- Additional protective equipment to protect wood-treatment facility workers (consistent with that identified in *Recommendations for the design and operation of wood preservation facilities – technical recommendations*).
- Addition of precautionary label statements regarding safety requirements (consistent with (*Recommendations for the design and operation of wood preservation facilities – technical recommendations*) and personal protective equipment (PPE).

Environment

- Additional statements to minimize potential environmental contamination during treatment, storage and disposal (consistent with those identified in *Recommendations for the design and operation of wood preservation facilities – technical recommendations)*.
- Appendix II lists all required label amendments, including instructions related to basic hygiene practices.
- All wood-treatment facilities will be required to follow the *Recommendations for the design and operation of wood preservation facilities – technical recommendations* document.
- The PMRA will also develop a heavy duty wood preservative risk management plan, in conjunction with Canadian stakeholders.

Other Information

Any person may file a notice of objection[4] regarding this decision on creosote, pentachlorophenol, chromated copper arsenate and ammoniacal copper zinc arsenate within 60 days from the date of publication of this Re-evaluation Decision. For more information regarding the basis for objecting (which must be based on scientific grounds), please refer to the Pesticides and Pest Management portion of Health Canada's website (Request a Reconsideration of Decision) or contact the PMRA's Pest Management Information Service

[4] As per subsection 35(1) of the *Pest Control Products Act*.

Appendix I Comments and Responses

1.0 Comment Pertaining to Pentachlorophenol Chemistry Assessment

The Pentachlorophenol Task Force had the following comment regarding the requirement for the registrant to provide product specification data to confirm levels of identified microcontaminants: It was requested that the PMRA clarify whether nominal and upper limit values for specific microcontaminants were being required, or whether microcontaminants were to be expressed in terms of overall Toxic Equivalents (TEQs).

Response

To clarify the data requirements related to the presence of microcontaminants in pentachlorophenol, it should be noted that while specifications for impurities are set for the product, there is no obligation to determine the levels of all impurities in every batch of material that is produced. Current practice is that specifications for micro contaminants remain valid for a site and process for 10 years. Consistent with what is done with other actives containing microcontaminants of concern, specifications are based on a five batch analysis. Upper certified limits can be set on a per congener basis. If the applicant wishes to include a maximum TEQ specification on the form, this can be included as a comment on a separate row. In any event, all internal specifications, as well as the determinations made to establish them and analytical methodology used should be provided under DACO 2.13.4 – Impurities of Toxicological Concern.

On the Statement of Product Specification Form (SPSF), specifications for the actual impurities must be provided. In the case of TSMP Track 1 substances, specifications must be provided for all substances known or suspected to be present. For pentachlorophenol these impurities include hexachlorobenzene and the 17 congeners of 2,3,7,8-substituted dioxins and furans, tetrachlorobenzene and pentachlorobenzene. For these contaminants, nominal values should be provided (if known, these are usually set as the average of the values observed in the preliminary analysis), and upper certified limits (maximum values) must be provided, on the SPSF.

The PMRA recognizes the use of TEQs as a way of comparing different materials for their toxicological potential. The PMRA further recognizes the use of bioassays as a potential method to determine total TEQs could be a cost effective way of monitoring batch to batch quality, but notes that to validate a TEQ approach would require side by side congener specific chemical analyses and bioassay determinations for several batches. The PMRA is open to exploring alternate ways of expressing or determining specifications of microcontaminants as a potential future option, but this would require consideration of the implications of taking a different approach.

2.0 Comment Pertaining to Pentachlorophenol Value Assessment

The Pentachlorophenol Task Force had the following comment regarding the target retention rate for pentachlorophenol in railway ties: The target retention rate of 3.4 – 3.8 kg/m^3 is based on the current Canadian Standards Association (CSA) standard and is insufficient to protect railroads ties for any significant period of time. The Task Force is working with the CSA to provide the corrected retention rate value.

Response

The PMRA will revise the required target retention rate to 3.4 – 6.4 kg/m^3. This will encompass the current American Wood Protection Association (AWPA) standard for railway ties and should adequately encompass the revised CSA rate. If required, this value can be further revised when new CSA values are available. This revised rate range is still well within the range for other pentachlorophenol applications which use target retention rates up to 16kg/m^3.

3.0 Comment Pertaining to Chromated Copper Arsenate Occupational Exposure Assessment

The following comment was received from the American Chemistry Council Biocides Panel Arsenical Wood Preservatives Task Force: The PMRA is proposing a label amendment requiring the worker to wear a rain suit. In reviewing the TRD's there is no mention of a rain suit. Table 7 of Section B of the TRD does not require a rain suit for "retort opening/charge removal/handling of treated lumber." To be consistent with the TRD's, it is requested that reference to a rain suit be removed from the proposed language in the PRVD.

Response

Although the Technical Recommendations Document does not identify the requirement to wear a rain suit, the supporting technical guidance document for chromated copper arsenate (namely, CCA Guidelines) does make reference to a rain suit. In consideration of the comment submitted, the PMRA has reconsidered the intent of the Technical Recommendations Document and the supporting technical guidance document and has revised and clarified the personal protective equipment (PPE) requirements for "retort opening/charge removal/handling of treated lumber" such that an apron or rain suit is only required if there is potential for getting wet by chromated copper arsenate solution. For consistency, this clarification has also been applied to the creosote, pentachlorophenol and ammoniacal copper zinc arsenate label requirements.

4.0 Comment Pertaining to Chromated Copper Arsenate Occupational Exposure and Environmental Assessment

The PMRA's proposed language for the "Directions for Use" section includes the statement "Fixation MUST be achieved prior to the treated wood being shipped." This statement is inconsistent with the Recommended Operating Practices for Freshly Treated Wood in the TRD which states, "The treated wood should be released from the protected fixation area only after chromated copper arsenate fixation has been verified by an acceptable test method (for example, CAN/CSA 080 and AWPA-A3/11)." To maintain consistency with the TRD, it is recommended that proposed statement be revised to state "Fixation MUST be achieved prior to the treated wood being released from the protected fixation area."

Response

The PMRA agrees with the Task Force that the label language should be revised. However, the PMRA has revised the label requirements as they are written in the TRD to read "The treated wood should be released from the protected fixation area only after chromated copper arsenate fixation has been verified by an acceptable test method." At present acceptable test methods include CAN/CSA 080 and AWPA-A3/11.

Appendix II Label Amendments for Heavy Duty Wood Preservative Products

A1. Label Amendments for Commercial Class Products Containing Creosote (Pressure Treatment Applications)

The label amendments presented below do not include all label requirements for individual end-use products, such as first aid statements, disposal statements, precautionary statements and supplementary protective equipment. Additional information on the labels of currently registered products should not be removed unless it contradicts the label statements given below.

A submission to request label revisions will be required within 90 days of finalization of the re-evaluation decision.

The labels of end-use products in Canada must be amended to include the following statements to further protect human health and the environment.

COMMON NAME: **Creosote**

CHEMICAL NAME: **Coal Tar; Coal Tar Creosote**

FORMULATION TYPES: **Liquid**

USE-SITE CATEGORIES: **Wood**

GUARANTEE
Label guarantees to be expressed as nominal guarantees—supporting data to be provided.

GENERAL LIMITATIONS

"DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters."

FIRST AID / TOXICOLOGICAL INFORMATION:

Note: First Aid and Toxicological information sections are to be made consistent across products and made consistent ***with the PMRA's Regulatory Directive DIR2007-01****,* First Aid Labelling Statements. *The proposed first aid label statements below are based on the first aid information in: i)* Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations *document (Environment Canada, 2004); ii) the current product labels; and iii) DIR2007-01. It is the registrant's responsibility to determine if the generic statements in DIR2007-01 are medically appropriate and to provide a rationale to the PMRA where statements differ from those presented in the directive.*

"If swallowed: Get medical attention or call a poison control centre immediately for treatment advice. Give conscious victim water or milk to drink. Then give 30-60 mL of Fleet's Phospho-Soda diluted 1:4 in water. Do not induce vomiting unless told to do so by a poison control centre or doctor."

If on skin or clothing: Immediately remove soaked clothing or articles in contact with the skin. Immediately wash contaminated skin thoroughly with soap or mild detergent and water. Call a poison control centre or doctor for treatment advice. Get prompt medical attention if the skin becomes inflamed (redness, itchiness or pain)."

"If inhaled: Immediately move the affected person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration. Keep affected person warm and quiet."

"If in eyes: Immediately flush eyes with flowing water, occasionally lifting the upper and lower lids. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Flush eyes for at least 15 minutes. Get medical attention or call a poison control centre for treatment advice."

"Chronic symptoms requiring medical referral: Skin irritation, sensitivity; skin lesions."

"Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention."

PRECAUTIONARY STATEMENTS

"Required precautionary measurements are as identified in the *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical recommendations* document (Environment Canada). **A summary of these requirements is as follows:"**

"Do not carry, store or consume food or drink in working areas (for example, areas where preservatives are stored or used, or where freshly treated wood is stored)."

"Do not carry or smoke cigarettes in working areas."

"Wash hands thoroughly before leaving working areas and before eating, drinking, smoking or using the toilet facilities."

"Do not expose cuts or abrasions to preservatives."

"Wash skin immediately if contact with preservative solutions occurs"

"Get immediate first aid if skin or eyes contact preservative solutions. Even small contact exposures should receive immediate cleaning and treatment."

"Change outer clothing immediately if splashed with preservative solutions. Change clothing daily if any incidental contact with the treatment chemical occurs. Wash contaminated clothing separately from other clothing."

"Wear impermeable footwear in all working areas. Preservative solutions may penetrate leather shoes and apparel."

"Shower daily immediately after work."

"All work clothing and boots must be left at the plant."

"Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them."

PROTECTIVE CLOTHING AND EQUIPMENT:

"Personal protective equipment requirements are as identified in the *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical recommendations* document (Environment Canada). **A summary of these requirements is as follows:**

Activity	Personal Protective Equipment
Retort Opening/Charge Removal/Handling treated lumber	• Wear approved respirator if air concentrations are unknown or at or above threshold limit value (TLV) • Wear rubber boots, creosote-impermeable gauntlets, face shield or goggles when opening cylinder doors and removing and unloading charges • Wear creosote-impermeable gauntlets, apron or rain suit, and boots if handling treated wood manually • Wear a respirator if treated wood is handled in enclosed areas (for example, box cars)
Load Jams	Cylinder Entry • If retort TLV levels are exceeded or concentration is unknown, wear self-contained full-face respirator mask, impermeable coveralls, boots and creosote-impermeable gauntlets • If TLV levels are below regulatory limits; wear NIOSH-approved respirator, impermeable coveralls, boots and creosote-impermeable gauntlets
Equipment Maintenance	Welding Contaminated Equipment: • Wear an approved respirator

Activity	Personal Protective Equipment
Unloading or Handling Creosote	• Wear goggles or face shield, creosote-impermeable gauntlets, coveralls, impermeable aprons and impermeable shoes or boots • Wear approved respirator if air concentrations are unknown or at or above TLVs
Sampling procedures	• Wear eye protection and gauntlets impermeable to creosote when sampling creosote solutions. Non-routine sampling efforts, such as through cover ports, may necessitate more stringent precautions • Wear creosote-impermeable gauntlets when taking borings from freshly-treated wood
Cleaning cylinders or storage tanks	• Wear NIOSH-approved respirators (or breathing apparatus), creosote-impermeable gauntlets, outer clothing and boots during all vessel entries • Wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. • Wear combination respirator that includes Type C-supplied air respirator and full facepiece operated in pressure-demand or other positive pressure or continuous-flow mode and auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.
Handling and maintaining contaminated equipment	• Wear creosote impermeable apron, gauntlets and boots

Refer to the *Recommendations for the Design and Operations of Wood Preservation Facilities Technical Recommendations* document (Environment Canada) **for a complete listing of precautions, handling instructions and personal hygiene."**

ENVIRONMENTAL HAZARDS section

"Toxic to aquatic organisms."

DIRECTIONS FOR USE section

References to CSA standards and other standards to be removed.

"Treat the wood using the pressure treatment procedures consistent with the equipment being used and standard treatment practices. Treatment conditions must be calibrated to yield the target retention levels found in the following table:"

Decay Susceptibility	Commodity	Target Retention (kg/m^3)
Ground contact	**Railway ties**	**96–128**
Above Ground	**sawn products**	**80–128**
Ground/Freshwater contact	**sawn products**	**96–192**
	Pilings and Posts	**96–272**
	Poles	**120–320**
Salt Water (marine) Contact	**Pilings, sawn products**	**290–400**

"Store treated lumber on a roofed drip pad until dripping has ceased. Slope lumber on the drip pad to expedite drainage and to ensure that no puddles remain on the surface of the wood. Manage drippage and other related wastes to prevent release in the environment."

"Drip aprons must be roofed, paved and drained to prevent dilution and loss of treatment solution."

"DO NOT expose treated lumber to rains immediately after treatment."

"Conditions MUST be provided to minimize leaching/bleeding of preservative from treated wood."

"For further information on storage, handling and disposal of treated wood, contact the manufacturer of this product or the provincial regulatory agency."

"All operational procedures must be consistent with the Environment Canada document *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations*."

Disposal section

For Non-Bulk Containers

"1. Containers must be steam cleaned prior to disposal.

2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.

3. Make the empty container unsuitable for further use.

4. Dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills."

"DO NOT BURN CREOSOTE-TREATED WOOD EXCEPT IN FACILITIES AUTHORIZED FOR DISPOSAL OF SUCH PRODUCTS. DO NOT USE CREOSOTE-TREATED WOOD AS A COMPOST OR MULCH."

A2. Label Amendments for Commercial Class Products Containing Creosote (Brush On Applications)

The label amendments presented below do not include all label requirements for individual end-use products, such as first aid statements, disposal statements, precautionary statements and supplementary protective equipment. Additional information on the labels of currently registered products should not be removed unless it contradicts the label statements given below.

A submission to request label revisions will be required within 90 days of finalization of the re-evaluation decision.

The labels of end-use products in Canada must be amended to include the following statements to further protect human health and the environment.

COMMON NAME: **Creosote**
CHEMICAL NAME: **Coal Tar; Coal Tar Creosote**

FORMULATION TYPES: Liquid

USE-SITE CATEGORIES: Wood

GUARANTEE
Label guarantees to be expressed as nominal guarantees—supporting data to be provided.

GENERAL LIMITATIONS

"DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters."

PRODUCT LIMITATIONS

"For use ONLY on newly cut surfaces and drill holes of pressure-treated creosote timbers and lumber."

FIRST AID / TOXICOLOGICAL INFORMATION:

Note: *First Aid and Toxicological information sections are to be harmonized to be consistent across products and consistent with the* ***PMRA's Regulatory Directive DIR2007-01****,* First Aid Labelling Statements. *The proposed first aid label statements below are based on the first aid information in: i)* Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations *document (Environment Canada, 2004); ii) the current product labels; and iii) DIR2007-01. It is the registrant's responsibility to determine if the generic statements in DIR2007-01 are medically appropriate and to provide a rationale to the PMRA where statements differ from those presented in the directive.*

"If swallowed: Get medical attention or call a poison control centre immediately for treatment advice. Give conscious victim water or milk to drink. Then give 30-60 mL of Fleet's Phospho-Soda diluted 1:4 in water. Do not induce vomiting unless told to do so by a poison control centre or doctor."

"If on skin or clothing: Immediately remove soaked clothing or articles in contact with the skin. Immediately wash contaminated skin thoroughly with soap or mild detergent and water. Call a poison control centre or doctor for treatment advice. Get prompt medical attention if the skin becomes inflamed (redness, itchiness or pain)."

"If inhaled: Immediately move the affected person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration. Keep affected person warm and quiet."

"If in eyes: Immediately flush eyes with flowing water, occasionally lifting the upper and lower lids. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Flush eyes for at least 15 minutes. Get medical attention or call a poison control centre for treatment advice."

"Chronic symptoms requiring medical referral: Skin irritation, sensitivity; skin lesions."

"Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention."

ENVIRONMENTAL HAZARDS section

"Toxic to aquatic organisms."

DIRECTIONS FOR USE section

"For further information on storage, handling and disposal of treated wood, contact the manufacturer of this product or the provincial regulatory agency."

"DO NOT BURN CREOSOTE-TREATED WOOD EXCEPT IN FACILITIES AUTHORIZED FOR DISPOSAL OF SUCH PRODUCTS. DO NOT USE CREOSOTE-TREATED WOOD AS A COMPOST OR MULCH."

B. Label Amendments for Commercial Class Products Containing Pentachlorophenol

The label amendments presented below do not include all label requirements for individual end-use products, such as first aid statements, disposal statements, precautionary statements and supplementary protective equipment. Additional information on the labels of currently registered products should not be removed unless it contradicts the label statements given below.

A submission to request label revisions will be required within 90 days of finalization of the re-evaluation decision.

The labels of end-use products in Canada must be amended to include the following statements to further protect human health and the environment.

COMMON NAME: **Pentachlorophenol**

CHEMICAL NAME: **Pentachlorophenol Plus Related Active Chlorophenols**

FORMULATION TYPES: **Solution, Solid**

USE-SITE CATEGORIES: **Wood**

GUARANTEE
Label guarantees to be expressed as nominal guarantees—supporting data to be provided.

GENERAL LIMITATIONS

"DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters."

FIRST AID / TOXICOLOGICAL INFORMATION:

Note: First Aid and Toxicological information sections are to be harmonized to be consistent across products and consistent with the ***PMRA's Regulatory Directive DIR2007-01****, First Aid Labelling Statements. The proposed first aid label statements below are based on the first aid information in: i)* Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations *document (Environment Canada,2004); ii) the current product labels; and iii) DIR2007-01. It is the registrant's responsibility to determine if the generic statements in DIR2007-01 are medically appropriate and to provide a rationale to the PMRA where statements differ from those presented in the directive.*

For PENTACHLOROPHENOL solids:

"If swallowed: Get medical attention or call a poison control centre immediately for treatment advice. If the victim is conscious, have that person immediately drink large quantities of water. Do not induce vomiting unless told to do so by a poison control centre or doctor."

For PENTACHLOROPHENOL in oil:

"If swallowed: Get medical attention or call a poison control centre immediately for treatment advice. Do not induce vomiting."

"If on skin or clothing: Immediately remove soaked clothing or articles in contact with the skin. Immediately wash contaminated skin thoroughly with soap or mild detergent and water. Call a poison control centre or doctor for treatment advice. Get prompt medical attention if the skin becomes inflamed (redness, itchiness or pain)."

"If inhaled: Immediately remove the exposed person to fresh air. (Coughing and sneezing occur almost immediately after excessive inhalation of chlorophenols.) If person is not breathing, call 911 or an ambulance then apply artificial respiration. Keep the affected person comfortable and quiet. PENTACHLOROPHENOL can cause excessive body temperature. Get medical attention or call a poison control centre or doctor for treatment advice."

"If in eyes: Immediately flush eyes with flowing water, occasionally lifting the upper and lower lids. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Flush eyes for at least 15 minutes. Use boric acid solution and cortisone ophthalmic drops. Get medical attention or call a poison control centre for treatment advice."

"Chronic symptoms requiring medical referral: Dermatitis, headaches, nausea; hyperthermia, fever, sweating, weight loss; chloracne."

"Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention."

PRECAUTIONARY STATEMENTS

"Required precautionary measurements are as identified in *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* document (Environment Canada). A summary of these requirements is as follows: "

"Do not carry, store or consume food or drink in working areas (for example, areas where preservatives are stored or used, or where freshly treated wood is stored)."

"Do not carry or smoke cigarettes in working areas."

"Wash hands thoroughly before leaving working areas and before eating, drinking, smoking or using the toilet facilities."

"Do not expose cuts or abrasions to preservatives."

"Wash skin immediately if contact with preservative solutions occurs."

"Get immediate first aid if skin or eyes contact preservative solutions. Even small contact exposures should receive immediate cleaning and treatment."

"Change outer clothing immediately if splashed with preservative solutions. Change clothing daily if any incidental contact with the treatment chemical occurs. Wash contaminated clothing separately from other clothing."

"Wear impermeable footwear in all working areas. Preservative solutions may penetrate leather shoes and apparel."

"Shower daily immediately after work."
"All work clothing and boots must be left at the plant.

"Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them."

PROTECTIVE CLOTHING AND EQUIPMENT:

"**Personal protective equipment requirements are as identified in** *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* document (Environment Canada). **A summary of these requirements is as follows:**

Activity	Personal Protective Equipment
Retort Opening/Charge Removal/Handling treated lumber	• Wear approved respirator if air concentrations are unknown or at or above TLVs • Wear rubber boots, impermeable gauntlets, face shield or goggles when opening cylinder doors and removing and unloading charges • Wear impermeable gauntlets, apron or rain suit, and boots if handling treated wood manually. • Wear a respirator if treated wood is handled in enclosed areas (eg. boxcars)
Load Jams	Cylinder Entry • If retort TLV levels are exceeded or concentration is unknown, wear self-contained full-face respirator mask, impermeable coveralls, boots and gauntlets • If TLV levels are below regulatory limits; wear NIOSH-approved respirator, impermeable coveralls, boots and gauntlets
Equipment Maintenance	Welding Contaminated Equipment: • Wear an approved respirator
Unloading PENTACHLOROPHENOL Solids	• Wear goggles or face shield, impermeable gauntlets, coveralls, impermeable aprons and impermeable shoes or boots • Wear approved respirator whenever exposure to dust can occur
Preparing PENTACHLOROPHENOL Work Solutions	• Wear full face protection, organic solvent impermeable gauntlets, coveralls, aprons and shoes or boots for all operations involving handling of PENTACHLOROPHENOL solids • Wear an approved full facepiece respirator whenever dust conditions occur. Respirator cartridges must be NIOSH-rated for protection from "pesticides and organic vapours and dusts"
Sampling procedures	• Wear eye protection and gauntlets impermeable to organic solvents when sampling PENTACHLOROPHENOL solutions. • Wear impermeable gauntlets when taking borings from freshly-treated wood
Cleaning cylinders or storage tanks	• Wear NIOSH-approved respirators (or breathing apparatus), organic solvent impermeable gauntlets, outer clothing and boots during all vessel entries
Handling and maintaining contaminated equipment	• Wear impermeable apron, gauntlets and boots

Refer to *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* document (Environment Canada) **for a complete listing of precautions, handling instructions and personal hygiene."**

ENVIRONMENTAL HAZARDS section

"Toxic to aquatic organisms."

DIRECTIONS FOR USE section

References to CSA standards and other standards to be removed.

"Dilute with appropriate hydrocarbon solvent to achieve a treating solution of 5–10% pentachlorophenol"

"Treat the wood using the pressure treatment procedures consistent with the equipment being used and standard treatment practices. Treatment conditions must be calibrated to yield the target retention levels found in the following table:"

Decay Susceptibility	Commodity	Target Retention (kg/m^3)
Ground contact	Railway ties	3.4–6.4
Above Ground	sawn products, plywood	4.8–6.4
Ground/Freshwater contact	sawn products, plywood	6.4–8.0
	Posts and Poles	6.1–12.8
	Pilings	12
	Poles (thermal butt treatment)	16

"Store treated lumber on a roofed drip pad until dripping has ceased. Slope lumber on the drip pad to expedite drainage and to ensure that no puddles remain on the surface of the wood. Manage drippage and other related wastes to prevent release in the environment."

"Drip aprons must be roofed, paved and drained to prevent dilution and loss of treatment solution."

"DO NOT expose treated lumber to rains immediately after treatment."

"Conditions MUST be provided to minimize leaching/bleeding of preservative from treated wood."

"For further information on storage, handling and disposal of treated wood, contact the manufacturer of this product or the provincial regulatory agency."

"All operational procedures must be consistent with the Environment Canada document: *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations*."

For Bulk Containers

"For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills."

For Solid Block or Flake Formulations

"1. Follow provincial instruction for any required additional cleaning of the wrappings prior to disposal.

2. Dispose of the wrappings in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills."

"DO NOT BURN PENTACHLOROPHENOL-TREATED WOOD EXCEPT IN FACILITIES AUTHORIZED FOR DISPOSAL OF SUCH PRODUCTS. DO NOT USE PENTACHLOROPHENOL-TREATED WOOD AS A COMPOST OR MULCH."

C. Label Amendments for Commercial Class Products Containing CCA

The label amendments presented below do not include all label requirements for individual end-use products, such as first aid statements, disposal statements, precautionary statements and supplementary protective equipment. Additional information on the labels of currently registered products should not be removed unless it contradicts the label statements given below.

A submission to request label revisions will be required within 90 days of finalization of the re-evaluation decision.

The labels of end-use products in Canada must be amended to include the following statements to further protect human health and the environment.

COMMON NAME: **CCA**

CHEMICAL NAME: **chromated copper arsenate: hexavalent chromium oxide, divalent copper oxide, and pentavalent arsenic oxide**

FORMULATION TYPES: Solution, Powder, Solid, Granular

USE-SITE CATEGORIES: Wood

GUARANTEE

Label guarantees to be expressed as nominal guarantees – supporting data to be provided.

GENERAL LIMITATIONS

"DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters."

FIRST AID / TOXICOLOGICAL INFORMATION:

Note: First Aid and Toxicological information sections are to be harmonized to be consistent across products and consistent with the **PMRA's Regulatory Directive DIR2007-01**, First Aid Labelling Statements. *The proposed first aid label statements below are based on the first aid information in: i)* Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations *document (Environment Canada, 2004); ii) the current product labels; and iii) DIR2007-01. It is the registrant's responsibility to determine if the generic statements in DIR2007-01 are medically appropriate and to provide a rationale to the PMRA where statements differ from those presented in the directive.*

"If swallowed: Promptly have the exposed person drink a large quantity of milk, egg whites, gelatin solution or water if the aforementioned are unavailable. Never give liquids to an unconscious person. Do not induce vomiting. Get medical attention or call poison control centre immediately for subsequent advice (stomach pumping by medical personnel is desirable)."

"If on skin or clothing: Flush contaminated area immediately with flowing water. Subsequently remove contaminated clothing. Continue to flush contaminated skin for at least 15 minutes. Call a poison control centre or doctor for treatment advice. Get prompt medical attention if the skin becomes inflamed (redness, itchiness or pain)."

"If inhaled: Immediately remove the exposed person to fresh air. If breathing has stopped call 911 or an ambulance then apply artificial respiration. Keep the affected person warm and quiet. Get immediate medical attention or call a poison control centre for treatment advice."

"If in eyes: Immediately flush eyes with flowing water, occasionally lifting the upper and lower lids. Flush eyes for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Use boric acid solution and cortisone ophthalmic drops. Get medical attention or call a poison control centre for treatment advice."

"Chronic symptoms requiring medical referral: ulceration of the skin or mucous membrane (breaks in the skin, disintegration of tissue, pus formation); abdominal pains and other persistent symptoms of illness."

"Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention."

PRECAUTIONARY STATEMENTS

"Required precautionary measurements are as identified in *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* (Environment Canada). **A summary of these requirements is as follows:"**

"Do not carry, store or consume food or drink in working areas (for example, areas where preservatives are stored or used, or where freshly treated wood is stored)."

"Do not carry or smoke cigarettes in working areas."

"Wash hands thoroughly before leaving working areas and before eating, drinking, smoking or using the toilet facilities."

"Do not expose cuts or abrasions to preservatives."

"Wash skin immediately if contact with preservative solutions occurs"

"Get immediate first aid if skin or eyes contact preservative solutions. Even small contact exposures should receive immediate cleaning and treatment."

"Change outer clothing immediately if splashed with preservative solutions. Change clothing daily if any incidental contact with the treatment chemical occurs. Wash contaminated clothing separately from other clothing."

"Wear impermeable footwear in all working areas. Preservative solutions may penetrate leather shoes and apparel."

"Shower daily immediately after work."

"All work clothing and boots must be left at the plant."

"Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them."

PROTECTIVE CLOTHING AND EQUIPMENT:

"Personal protective equipment requirements are as identified in the *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* document (Environment Canada). **A summary of these requirements is as follows:**

Activity	Personal Protective Equipment
Retort Opening/Charge Removal/Handling treated lumber	• Wear approved respirator if air concentrations are unknown or at or above TLVs • Wear rubber boots, impermeable gauntlets, face shield or goggles when opening retort doors and removing and unloading charges • Wear impermeable gauntlets when handling freshly treated wood • Wear impermeable gloves, apron or rain suit, and boots if there is potential for getting wet by CCA solution
Load Jams	Cylinder Entry • If retort TLV levels are exceeded or concentration is unknown, wear self-contained full-face respirator mask, impermeable coveralls, boots and impermeable gauntlets • If TLV levels are below regulatory limits; wear NIOSH-approved respirator, impermeable coveralls, boots and gauntlets
Equipment Maintenance	Welding Contaminated Equipment: • Wear an approved respirator
Unloading Bulk CCA Concentrate	• Wear chemical goggles or face shield, impermeable gauntlets, coveralls, impermeable aprons and impermeable shoes or boots
Preparing CCA work solutions	• Wear full face protection, impermeable gauntlets, coveralls, impermeable aprons and impermeable shoes or boots for all operations involving direct exposure to CCA concentrates
Sampling procedures	• Wear eye protection and impermeable gauntlets when sampling CCA solutions (including full face protection with CCA concentrates) • Wear impermeable gloves when taking borings from freshly treated wood
Cleaning cylinders, fixation chambers or storage tanks	• Wear NIOSH-approved respirators (or breathing apparatus), impermeable gauntlets, apron (rubber or polyethylene coated) and rubber boots during all vessel entries
Handling and maintaining contaminated equipment	• Wear impermeable apron, gauntlets and boots if there is potential for getting wet by CCA solution

Refer to the *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* document (Environment Canada) **for a complete listing of precautions, handling instructions and personal hygiene."**

ENVIRONMENTAL HAZARDS section

"Toxic to aquatic organisms."

DIRECTIONS FOR USE section

References to CSA standards and other standards to be removed.

"Dilute with water to achieve a treating solution of 0.5–10% active ingredients"

"Treat the wood using the pressure treatment procedures consistent with the equipment being used and standard treatment practices. Treatment conditions must be calibrated to yield the target retention levels found in the following table:"

Decay Susceptibility	Commodity	Target Retention (kg/m^3)
Above Ground	sawn products, plywood, laminations	4.0
Ground/Freshwater contact	sawn products, plywood, laminations, posts	6.4
	sawn products (in extreme decay conditions)	8.0
	plywood, poles & posts (extreme decay conditions)	9.6
	pilings	12.0
Salt Water (Marine) contact	pilings, sawn products	24.0

"Store treated lumber on a roofed drip pad until dripping has ceased. Slope lumber on the drip pad to expedite drainage and to ensure that no puddles remain on the surface of the wood. Manage drippage and other related wastes to prevent release in the environment."

"Drip aprons must be roofed, paved and drained to prevent dilution and loss of treatment solution."

"DO NOT expose treated lumber to rains immediately after treatment."

"Conditions MUST be provided whereby the wood can undergo FIXATION."

"The treated wood should be released from the protected fixation area only after CCA fixation has been verified by an acceptable test method."

"For further information on storage, handling and disposal of treated wood, contact the manufacturer of this product or the provincial regulatory agency."

"All operational procedures must be consistent with the Environment Canada document: *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* document."

For Non-Bulk Containers

"1. Triple-rinse with water prior to disposal. Rinse water should be used for the preparation of working solutions.

2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.

3. Make the empty container unsuitable for further use.

4. Dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills."

"DO NOT BURN CCA-TREATED WOOD EXCEPT IN FACILITIES AUTHORIZED FOR DISPOSAL OF SUCH PRODUCTS. DO NOT USE CCA-TREATED WOOD AS A COMPOST OR MULCH."

D. Label Amendments for Commercial Class Products Containing ACZA

The label amendments presented below do not include all label requirements for individual end-use products, such as first aid statements, disposal statements, precautionary statements and supplementary protective equipment. Additional information on the labels of currently registered products should not be removed unless it contradicts the label statements given below. A submission to request label revisions will be required within 90 days of finalization of the re-evaluation decision. The labels of end-use products in Canada must be amended to include the following statements to further protect human health and the environment.

COMMON NAME: **ACZA**

CHEMICAL NAME: **ammoniacal copper zinc arsenate: arsenic pentoxide, cuprous oxide and zinc oxide**

FORMULATION TYPES: Solution

USE-SITE CATEGORIES: Wood

GUARANTEE

Label guarantees to be expressed as nominal guarantees – supporting data to be provided.

GENERAL LIMITATIONS

"Not for treatment of wood for residential uses"

"DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters."

FIRST AID/TOXICOLOGICAL INFORMATION:

Note: *First Aid and Toxicological information sections are to be harmonized to be consistent across products and consistent with the* ***PMRA's Regulatory Directive DIR2007-01***, First Aid Labelling Statements. *The proposed first aid label statements below are based on the first aid information in: i)* Recommendations for the Design and Operations of Wood Preservation Facilities – Technical recommendations *document (Environment Canada, 2004); ii) the current product labels; and iii) DIR2007-01. It is the registrant's responsibility to determine if the generic statements in DIR2007-01 are medically appropriate and to provide a rationale to the PMRA where statements differ from those presented in the directive.*

"If swallowed: Give conscious victim a large quantity of water or milk. Never give liquids to an unconscious person. Do not induce vomiting unless told to do so by a poison control centre or doctor. Get immediate medical attention or call a poison control centre for further treatment advice (stomach pumping by medical personnel is desirable)."

"If on skin or clothing: Flush contaminated area immediately with flowing water, while removing soaked clothing or articles in contact with the skin. Continue to flush contaminated skin for at least 15 minutes. Call a poison control centre or doctor for treatment advice. Get prompt medical attention if the skin becomes inflamed (redness, itchiness or pain)."

"If inhaled: Immediately remove the person to fresh air (coughing and sneezing occur almost immediately after excessive inhalation of ammonia fumes. If breathing has stopped call 911 or an ambulance then apply artificial respiration. Keep the affected person warm and quiet. Get immediate medical attention or call a poison control centre for further treatment advice."

"If in eyes: Immediately flush eyes with flowing water, occasionally lifting the upper and lower lids. Flush eyes for at least 30 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention or call a poison control centre for treatment advice."

"Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention."

PRECAUTIONARY STATEMENTS

"Required precautionary measurements are as identified in *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* document (Environment Canada). **A summary of these requirements is as follows:"**

"Do not carry, store or consume food or drink in working areas (for example, areas where preservatives are stored or used, or where freshly treated wood is stored)."

"Do not carry or smoke cigarettes in working areas."

"Wash hands thoroughly before leaving working areas and before eating, drinking, smoking or using the toilet facilities."

"Do not expose cuts or abrasions to preservatives."

"Wash skin immediately if contact with preservative solutions occurs."

"Get immediate first aid if skin or eyes contact preservative solutions. Even small contact exposures should receive immediate cleaning and treatment."

"Change outer clothing immediately if splashed with preservative solutions. Change clothing daily if any incidental contact with the treatment chemical occurs. Wash contaminated clothing separately from other clothing."

"Wear impermeable footwear in all working areas. Preservative solutions may penetrate leather shoes and apparel."

"Shower daily immediately after work."

"All work clothing and boots must be left at the plant."

"Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them."

PROTECTIVE CLOTHING AND EQUIPMENT:

"Personal protective equipment requirements are as identified in *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations* document (Environment Canada). **A summary of these requirements is as follows:**

Activity*	Personal Protective Equipment
Retort Opening/Charge Removal/Handling treated lumber	• Wear approved respirator if air concentrations are unknown or at or above TLVs • Wear rubber boots, impermeable gauntlets, face shield or goggles when opening cylinder doors and removing and unloading charges. • Wear impermeable gauntlets when handling freshly treated charges • Wear impermeable gauntlets, aprons or rain suit, and boots if there is potential for getting wet by ACZA solution
Load Jams	Cylinder Entry • If retort TLV levels are exceeded or concentration is unknown, wear self-contained full-face respirator mask, impermeable coveralls, boots and gauntlets • If TLV levels are below regulatory limits; wear NIOSH-approved respirator, impermeable coveralls, boots and impermeable gauntlets
Equipment Maintenance	Welding Contaminated Equipment: • Wear an approved respirator
Unloading Bulk Ammonium Hydroxide	• Wear face shield, impermeable gauntlets, coveralls, impermeable aprons and impermeable shoes or boots
Unloading Drums of Arsenic Acid	• Wear goggles, impermeable gauntlets, full-length impermeable apron/suit
Preparing ACZA work solutions	• Wear full face protection mask with ammonia canister, impermeable gauntlets, coveralls, impermeable aprons and impermeable shoes or boots for all operations involving direct exposure to ACZA solutions and chemical ingredients
Sampling procedures	• Wear eye protection and impermeable gauntlets when sampling ACZA solutions (including full face protection with ACZA solutions) • Wear impermeable gauntlets when taking borings from freshly-treated wood
Cleaning cylinders, fixation chambers or storage tanks	• Wear NIOSH-approved respirators (or breathing apparatus), impermeable gauntlets, apron (rubber or polyethylene coated) and rubber boots during all vessel entries

Activity*	Personal Protective Equipment
Handling and maintaining contaminated equipment	• Wear impermeable apron, gauntlets and boots if there is potential for getting wet by ACZA solution

Refer to *Recommendations for the Design and Operations of Wood Preservation Facilities Technical Recommendations* (Environment Canada) **for a complete listing of precautions, handling instructions and personal hygiene."**

ENVIRONMENTAL HAZARDS section

"Toxic to aquatic organisms."

DIRECTIONS FOR USE section

References to CSA standards and other standards to be removed.

"Dilute with water to achieve a treating solution of 0.5–10% active ingredients"

"Treat the wood using the pressure treatment procedures consistent with the equipment being used and standard treatment practices. Treatment conditions must be calibrated to yield the target retention levels found in the following table:"

Decay Susceptibility	Commodity	Target Retention (kg/m^3)
Above Ground	sawn products, plywood, laminations	4.0
Ground/Freshwater contact	sawn products, plywood, laminations, posts	6.4
	sawn products (in extreme decay conditions)	8.0
	plywood, poles & posts (extreme decay conditions)	9.6
	pilings	12.0
Salt Water (Marine) contact	pilings, sawn products	30.0

"Store treated lumber on a roofed drip pad until dripping has ceased. Slope lumber on the drip pad to expedite drainage and to ensure that no puddles remain on the surface of the wood. Manage drippage and other related wastes to prevent release in the environment."

"Drip aprons must be roofed, paved and drained to prevent dilution and loss of treatment solution."

"DO NOT expose treated lumber to rains immediately after treatment."

"Conditions MUST be provided whereby the wood can undergo stabilization."

"For further information on storage, handling and disposal of treated wood, contact the manufacturer of this product or the provincial regulatory agency."

"All operational procedures must be consistent with the Environment Canada document *Recommendations for the Design and Operations of Wood Preservation Facilities – Technical Recommendations*."

For Non-Bulk Containers

"1. Triple-rinse with water prior to disposal. Rinse water should be used for the preparation of working solutions.

2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.

3. Make the empty container unsuitable for further use.

4. Dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills."

"DO NOT BURN ACZA-TREATED WOOD EXCEPT IN FACILITIES AUTHORIZED FOR DISPOSAL OF SUCH PRODUCTS. DO NOT USE ACZA-TREATED WOOD AS A COMPOST OR MULCH."